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ADEGEYE, OLUWASEUN				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary**Application No.**

10/785,404

Applicant(s)

LEE, SANG-HAK

Examiner

OLUWASEUN A. ADEGEYE

Art Unit

2481

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06/20/2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

5) ☒ Claim(s) 1 - 2, 6, 8 - 11, 13 - 21, 23 - 28, 30, 32, 35, 37, 40 - 44, 54 - 58, 78, 83, 85, 91 - 98, 110 - 132, 134 - 149 is/are pending in the application.

5a) Of the above claim(s) ____ is/are withdrawn from consideration.

6) ☐ Claim(s) ____ is/are allowed.

7) ☒ Claim(s) 1 - 2, 6, 8 - 11, 13 - 21, 23 - 28, 30, 32, 35, 37, 40 - 44, 54 - 58, 78, 83, 85, 91 - 98, 110 - 132, 134 - 149 is/are rejected.

8) ☐ Claim(s) ____ is/are objected to.

9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☒ The drawing(s) filed on 02/25/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date ____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1, 13, 30, 110 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 – 2, 6, 8 – 11, 13 – 18, 20, 21, 23 – 27, 30, 32, 35, 37, 40, 41, 54 – 58, 64, 78, 83 – 98, 110 – 132, 134 – 139, 141 - 149 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue et al (US 6,580,462 B2), and Hasegawa et al (US 5,933,839) in view Well known Knowledge in the art.

As to **claim 1**, Inoue discloses a display apparatus (14) connected with an external storage medium (45) disposed external to the display apparatus, the apparatus comprising (see fig. 1):

a receiving processor (32) that receives a television broadcasting signal (see column 5, lines 1 – 13) and at least a digital video signal and/or an audio signal from the external storage medium (see column 2, lines 32 – 38)

a controller (30) (see column 5, lines 14 – 25) that, if a user commands storage of the received the television broadcasting signal, stores the received the television broadcasting signal in the external storage medium (see column 8, lines 25 – 60) and

a display unit interface (44) to display the received digital video signal (see fig. 1)
a speaker to output the received audio signal (see column 8, lines 13 – 19)
wherein the controller is connected to the external storage through the port (see
fig. 1 and column 8, lines 37 – 44).

However Inoue does not disclose a display unit.

Official notice is taken that both the concept and advantages of attaching a
display unit to a display interface are well known and expected in the art. Thus it would
have been obvious to one of ordinary skill in the art at the time the invention was made
to attach a display unit to the display apparatus via a main unit display interface (44) so
as to provide a means for displaying the TV broadcast signals or the stored video data
from the external memory.

Inoue discloses wherein the controller is connected to the external storage
medium through the port and the controller downloads a file system, which stored in the
external storage medium, to the display apparatus and forms the virtual file system to
control the storage medium based on the downloaded file system (see column 9, lines
42 – 55).

Inoue does not explicitly disclose a file system although he clearly discloses an
external storage medium.

Hasegawa discloses a file system (see column 1, lines 40 – 43. "... A file system,
which is the generic name for external storage or a control procedure of this external
storage...").

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have added the file system taught by Hasegawa to the apparatus of Inoue to arrive at a file system that is reliable and easy to introduce into a conventional file system (see column 3, lines 38 – 40).

As to **claim 2**, Inoue in view of Hasegawa discloses the display apparatus of claim 1. Inoue discloses wherein the controller, according to a request from the user and when the received digital video signal and/or audio signal are stored in the external storage medium, determines whether the received digital video signal and/or audio signal is to be output through the port. Inoue discloses that whenever an external memory 100 is connected to the port, information can be transferred between the display apparatus and the external storage medium but only when there is connection. Therefore the connection of the external memory 100 to the external memory I/F 45 is the determination that the received digital video and audio signal is to be output through the port (I/F 45) (see column 9, lines 18 – 24. “.....In this embodiment, when the external memory element 100 is connected to the receiver 3 through the external memory interface 45, the receiver 3 can upgrade its function by using data read from the external memory element 100 connected thereto or reproduce and output video and audio data read from the external memory element 100”) (also see column 9, lines 42 – 49.”..... . Thus, a user who wishes to use contents information provided by the digital television broadcasting service purchase an external memory element 100 that stores a browser and other necessary programs and data that are necessary for obtaining the contents information. The function for obtaining and using such contents

information becomes available simply by connecting the external memory element to the external memory interface 45”).

As to **claim 13**, grounds for rejecting claim 1 apply to claim 13 in its entirety.

As to **claims 6 and 8 – 11**, grounds for rejecting claim 13 apply to claims 6, 8 – 11 in its entirety. Claim 8 additionally recites OSD. Inoue clearly discloses OSD (see column 8, lines 1 – 5 and column 11, lines 51 - 55).

As to **claims 14 – 18**, grounds for rejecting claim 13 apply to claims 14 - 18 in its entirety.

As to **claim 20**, Inoue in view of Hasegawa discloses a display apparatus connected with an external storage medium. Inoue discloses the apparatus comprising a receiving processor (30) that receives a digital video signal and an audio signal (see column 8, lines 45 – 60)

a compression (see column 7, lines 61 – 67) and decompression (14) unit that if a user requests storing of the received digital video signal and/or audio signal, is set to a compression mode, and compresses the digital video signal and/or the audio signal received from the receiving processor (see column 7, lines 61 – 67), and

if the user requests reproduction of the digital video signal and/or audio signal stored in the external storage medium, is set to a decompression mode, and restores the digital video signal and/or the audio signal received from an external storage medium; an output unit to output the reproduced digital video signal and/or audio signal (see column 7, lines 61 – 67. The above cited column discloses decompressing already compressed video and audio signals after user selection); and

a controller (remote controller) that
if the user requests the storage, controls the compression and decompression unit in the compression mode and stores the compressed digital video signal and/or audio signal compressed by the compression (see column 15, lines 30 – 39) and decompression unit in the external storage medium in real time (see column 7, lines 61 - 67), and

if the user requests the reproduction, outputs the digital video signal and/or audio signal from the external storage medium to the output unit through the compression and decompression unit (see column 7, lines 61 - 67).

Inoue discloses a speaker (see column 8, lines 15 - 19 and a display unit interface (44). However Inoue does not disclose a display unit.

Official notice is taken that both the concept and advantages of attaching a display unit to a display interface are well known and expected in the art. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to attach a display unit to the display apparatus via a main unit display interface (44) so as to provide a means for displaying the TV broadcast signals or the stored video data from the external memory.

As to **claims 21 and 23 – 27**, grounds for rejecting claim 13 apply to claims 21 and 23 - 27 in its entirety.

As to **claims 30, 32, 35, 37 and 40** grounds for rejecting claim 13 apply to claims 30, 32, 35, 37 and 40 in its entirety.

As to **claim 41**, this is a method claim corresponding to the apparatus claim 20. Therefore, claim 41 is analyzed and rejected as previously discussed with respect to claim 20.

As to **claims 54 – 56**, grounds for rejecting claim 1 apply to claims 54 – 56 in its entirety.

As to **claim 57**, Inoue in view of Hasegawa discloses the reproducing apparatus of claim 55. However Inoue does not disclose wherein the interface is a Universal serial Bus (USB) interface.

Official notice is taken that the concept and the advantages of wherein the interface is a Universal serial Bus (USB) interface are well known and expected in the art. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated a USB controller and a USB interface as the controller and the interface of the display apparatus because USBs can offer a faster data transfer speed, lower power consumption by the USB devices and higher power supplied to the USB devices.

As to **claims 58**, grounds for rejecting claim 83 apply to claim 58 in its entirety.

As to **claim 78**, Inoue discloses a computer readable medium encoded with processing instructions for implementing a method of claim 30 performed by a processor (see column 19, lines 33 – 40).

As to **claim 81**, Inoue in view of Hasegawa discloses the display apparatus of claim 1, wherein the received digital video and/or audio signal are stored in the external storage medium in a real time manner (figure 1 discloses a tuner 11 for receiving TV

broadcast signals and storing them on external memory 100. see column 2, lines 7 - 12).

As to **claim 83**, Inoue in view of Hasegawa discloses the display apparatus of claim 2. Inoue discloses another external memory (100). However Inoue does not disclose wherein the external storage medium is incorporated in a PDA.

Official notice is taken that the concept and the advantages of wherein the external storage medium can be incorporated in a PDA are well known and expected in the art. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated an external storage medium in a PDA so that a user can be able to view whatever he has recorded on the go.

As to **claims 84 and 85** grounds for rejecting claim 83 apply to claims 84 and 85 in its entirety.

As to **claims 91 – 95 and 97 - 98**, grounds for rejecting claims 83 – 85 respectively apply to claims 92 - 98 in its entirety.

As to **claim 96**, grounds for rejecting claim 57 apply to claim 96 in its entirety.

As to **claims 110, 112, 114, 116, 120, 122, 124, 128, 129, 130, 131, 138, 145, 146, 147, 148 and 149** grounds for rejecting claim 13 apply to claims **110, 112, 114, 116, 120, 122, 124, 128, 129, 130, 131, 138, 145, 146, 147, 148 and 149** in its entirety.

As to claims **111, 117, 118, 119, 125, 126, 127, 135, 136, 137, 142, 143, 144 and 147** grounds for rejecting claim 57 apply to claims **111, 117, 118, 119, 125, 126, 127, 135, 136, 137, 142, 143, 144 and 147** in its entirety.

As to claims **113, 121, 132, 139**, grounds for rejecting claim 8 apply to claims **113, 121, 132, 139** in its entirety.

4. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue in view of Hasegawa as applied to claim 13 and further in view of Kovacevic (US 7,030,930 B2).

As to **claim 19**, Inoue in view of Hasegawa discloses the display apparatus of claim 13. Inoue discloses wherein, when the digital video signal and/or audio signal are reproduced from the external storage medium, the controller displays the reproduced digital video signal and the received digital video signal together using the output unit (see column 11, line 14 – column 12, line 55).

Inoue does not disclose the output unit in a Picture-In-Picture format or in a Picture-By-Picture format.

Kovacevic discloses the output unit in a Picture-In-Picture format or in a Picture-By-Picture format (see column 6, lines 14 – 33).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have added outputting picture-in-picture as taught by Kovacevic to the apparatus of Inoue in view of Hasegawa to provide a display apparatus where a user can watch two separate programs at the same time.

5. Claims 115, 123, 134 and 141 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue on view of Hasegawa as applied to claim 13 above, and further in view of Well Known knowledge in the art.

As to **claim 115**, Inoue on view of Hasegawa discloses the television system of claim 114. However they do not disclose wherein the management information includes time information corresponding to a storage capacity of the external storage medium, and list information of the at least one of video signals and audio signals stored on the external storage medium. Official notice is taken that the concept and the advantages of wherein the management information includes time information corresponding to a storage capacity of the external storage medium, and list information of the at least one of video signals and audio signals stored on the external storage medium are well known and expected in the art. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the concept of including time information corresponding to a storage capacity of the external storage medium and list information of the video or audio signals stored in the external storage medium so as to allow a user to be able to easily access the stored information from the displayed list.

As to **claims 123, 134 and 141**, grounds for rejecting claim 115 apply to claims 123, 134 and 141 in its entirety.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to OLUWASEUN A. ADEGEYE whose telephone number is (571)270-1711. The examiner can normally be reached on Monday - Friday 7:30 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Vaughn can be reached on 571-272-3922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

10/18/2011

/O. A. A./
Examiner, Art Unit 2481

/WILLIAM C. VAUGHN JR/

Supervisory Patent Examiner, Art Unit 2481